

Minimize Deviation in Array [\(View\)](#)

You are given an array `nums` of `n` positive integers.

You can perform two types of operations on any element of the array any number of times:

- If the element is **even**, **divide** it by 2.
 - For example, if the array is `[1, 2, 3, 4]`, then you can do this operation on the last element, and the array will be `[1, 2, 3, 2]`.
- If the element is **odd**, **multiply** it by 2.
 - For example, if the array is `[1, 2, 3, 4]`, then you can do this operation on the first element, and the array will be `[2, 2, 3, 4]`.

The **deviation** of the array is the **maximum difference** between any two elements in the array.

Return the **minimum deviation** the array can have after performing some number of operations.

Example 1:

Input: `nums = [1,2,3,4]`

Output: 1

Explanation: You can transform the array to `[1,2,3,2]`, then to `[2,2,3,2]`, then the deviation will be $3 - 2 = 1$.

Example 2:

Input: `nums = [4,1,5,20,3]`

Output: 3

Explanation: You can transform the array after two operations to `[4,2,5,5,3]`, then the deviation will be $5 - 2 = 3$.

Example 3:

Input: `nums = [2,10,8]`

Output: 3

Constraints:

- `n == nums.length`
- `2 <= n <= 105`
- `1 <= nums[i] <= 109`